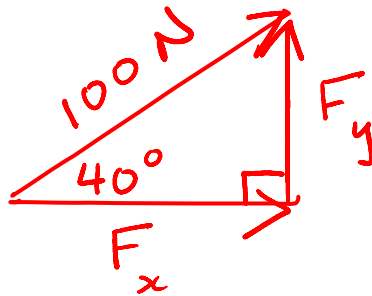
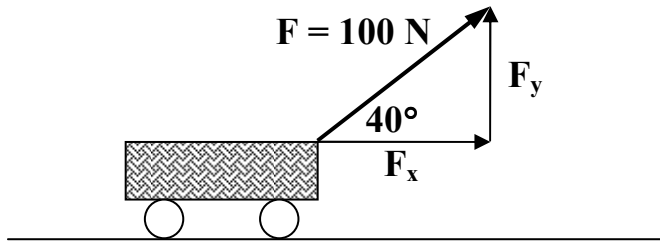


Example 8.

A boy pulls a wagon with a force of 100 N at 40 degrees to the horizontal. Find the pulling force (F_x) and the lifting force (F_y).



Pulling Force: $\frac{F_x}{100} = \cos 40^\circ$

$$F_x = 100 \cos 40^\circ$$

$$\boxed{F_x = 76.6\text{ N}}$$

Lifting Force: $\frac{F_y}{100} = \sin 40^\circ$

$$F_y = 100 \sin 40^\circ$$

$$\boxed{F_y = 64.3\text{ N}}$$